

Amendments to the Claims:

1. (cancelled)

2. (original) A process for preparation of nutritionally upgraded oilseed meals, which are protein and lipid-rich and have a reduced fibre content, and plant oils from oilseeds for use in fish or other non-human animal diets or human foods comprising the steps of:

- providing a source of oilseed;
- subjecting said oilseed to heat treatment to substantially reduce the concentration of at least some antinutritional components normally present in said oilseed to obtain heat-treated particulate seed;
- providing a source of unhydrolyzed animal offal;
- blending said heat-treated seed in particulate form with said animal offal, and if required water together with an antioxidant, to form a mixture thereof;
- cooking said mixture under conditions selected to substantially improve protein digestibility, and substantially free cellular water present in said animal offal, as well as to facilitate separation of protein from the lipid in said animal offal and said oilseeds to obtain a cooked mixture; and
- separating said cooked mixture into a stickwater fraction, a moisture containing protein-rich fraction, and an animal feed grade oil fraction.

3. (Currently Amended) In a process for the preparation of nutritionally upgraded oilseed meal ~~a protein concentrate and lipid source~~ from co-processing of animal offal with oilseed for use in fish or other non-human animal feeds, wherein the process includes the steps of providing a source of oilseed and cold pressing said oilseed to substantially reduce the particle size of said oilseed to yield a high value human grade oil and protein and lipid-rich meals meal with reduced fibre content; the improvement comprising the further steps of:

- providing a source of unhydrolyzed animal offal;
- blending said protein and lipid-rich meal with said animal offal, and if required water together with an antioxidant, to form a blended mixture thereof;
- cooking said blended mixture under conditions selected to substantially improve protein digestibility, and substantially free cellular water present in said animal offal, as well as to facilitate separation of protein from the lipid in said animal offal and said oilseeds to obtain a cooked mixture; and
- separating said cooked mixture into a stickwater fraction, a moisture containing protein-rich fraction, and an animal feed grade oil fraction.

4-6. (cancelled)

7. (original) The process according to claim 3, further including the step of extracting said protein and lipid-rich meals with a solvent.

8. (original) The process according to claim 2, further including the step of stabilizing said plant oils by adding an antioxidant.

9. (original) The process according to claim 2, further including the step of drying said protein-rich fraction to reduce its moisture content to below about 10%.

10. (original) The process according to claim 2, wherein said heat treatment is a rapid heat treatment.

11. (original) The process according to claim 2, wherein said oilseed is selected from the group consisting of canola, rape seed, soybeans, sunflower seed, flax seed, mustard seed, cotton seed, hemp and mixtures thereof.

12. (original) The process according to claim 2, wherein said oilseed is selected from the group consisting of canola, sunflower seed, flax seed, mustard seed and mixtures thereof.

13. (original) The process according to claim 2, wherein said animal offal is selected from the group consisting of fish processing waste, whole fish, fish by-catch, squid offal, whole birds without feathers, beef offal, poultry offal, lamb offal and mixtures thereof.

14. (original) The process according to claim 2, wherein said oilseed and said animal offal are mixed together in a ratio of about 10:90 to about 90:10 by weight.

15-41 (cancelled)

42. (currently amended) The process according to claim 3, said process further comprising the steps of:

- subjecting said oilseed to heat treatment at a temperature and time sufficient to deactivate, destroy or reduce concentration of some antinutritional factors present in said oilseed, improve digestibility and reduce moisture content;
- providing said source of unhydrolyzed animal product selected from the group consisting of animal offal, fish processing waste, whole fish, fish by-catch, squid offal, beef offal, lamb offal and whole birds without feathers;
- cooking said mixture at a temperature of about 85—95°C for a time sufficient to improve protein digestibility and free the bound water present in said animal offal and facilitate the separation of protein from the lipid in said animal product and said oilseed,
- removing fluid comprised of lipid and water soluble components from said mixture to obtain a pressed cake; and,
- drying the pressed cake at a temperature for a time sufficient for the pressed cake to reach a moisture content of about 7 - 10% to provide a protein concentrate.

43. (previously presented) The process of claim 42, including the further step of condensing the stickwater.

44. (previously presented) The process according to claim 42, wherein said heat treatment is carried out at a temperature of about 100-115°C for a time of about 1.5 to about 30 mins.

45. (previously presented) The process according to claim 42, further including the step of dehulling said oilseed.

46. (previously presented) The process according to claim 45, wherein said dehulling is carried out by impact or disc process coupled with a gravity screening and/or air-classification process.

47. (currently amended) The process according to claim 42, wherein said oilseed is ~~a member~~ selected from the group consisting of canola, rape seed, soybeans, sunflower seed, flax seed, mustard seed, cotton seed, hemp and mixtures thereof.

48 (currently amended) The process according to claim 47, wherein said oilseed is ~~a member~~ selected from the group consisting of canola, soybeans, sunflower seed, cotton seed and mixtures thereof.

49. (currently amended) The process according to claim 48, wherein said ~~animal~~ offal is fish offal.

50. (previously presented) The process of claim 42, further including the step of:

-adding a palatability enhancer to said mixture prior to the cooking

step or after the pressing step.

51. (previously presented) The process according to claim 42, further including the step of adding an antioxidant to the mixture prior to the cooking step or after the pressing step.

52. (currently amended) The process according to claim 50, wherein said palatability enhancer is ~~a member~~ selected from the group consisting of products based on krill, euphausiids, squid and mixtures thereof.

53. (currently amended) The process according to claim 51, wherein said antioxidant is ~~a member~~ selected from the group consisting of ethoxyquin, butylated hydroxyanisole, butylated hydroxytoluene, Vitamin E and mixtures thereof.

54. (previously presented) In a process for preparation of nutritionally upgraded oilseed meals, which are protein and lipid-rich and have a reduced fibre content, and plant oils from oilseeds for use in fish or other non-human animal diets or human foods the improvement comprising the steps of:

- providing a source of oilseed;
- subjecting said oilseed to a drying step to obtain oilseed having a moisture content of less than 10% to thereby improve dehulling of said oilseed;
- dehulling said oilseed to provide a source of dehulled oilseed;
- providing a source of unhydrolyzed animal offal;
- blending said dehulled oilseed with said animal offal, and if required

water together with an antioxidant, to form a mixture thereof;

- cooking said mixture under conditions selected to substantially improve protein digestibility, and substantially free cellular water and lipids present in said animal offal, as well as to facilitate separation of protein from the lipid in said animal offal and said oilseeds to obtain a cooked mixture; and
- separating said cooked mixture into a stickwater fraction, a moisture containing protein-rich fraction, and an animal feed grade oil fraction.

55. (previously presented) The process according to claim 2, wherein said oilseed is treated to dephytinize said oilseed.

56. (previously presented) The process according to claim 3, wherein said oilseed is treated to dephytinize said oilseed.

57. (previously presented) The process according to claim 54, wherein said oilseed is treated to dephytinize said oilseed.

58. (previously presented) The process according to claim 2, further comprising the step of extracting said protein rich fraction with a solvent.

59. (previously presented) The process according to claim 3, further including the step of extracting said protein and lipid rich meals with a solvent.

60. (previously presented) The process according to claim 54, further comprising the step of extracting said protein rich fraction with a solvent.

61. (previously presented) The process according to claim 58, wherein said solvent includes hexane.

62. (previously presented) The process according to claim 59, wherein said solvent includes hexane.

63. (previously presented) The process according to claim 60, wherein said solvent includes hexane.